

REMARKS/DISCUSSION OF ISSUES

By this Amendment, Applicant: amends claims 1, 12-14 and 20-21; cancels claim 11 without disclaimer of the underlying subject matter; and adds new claim 22.

Accordingly, claims 1-10 and 12-22 are pending in the application.

Applicant thanks the Examiner for acknowledging the claim for priority and receipt of certified copies of the priority documents, and for stating that the drawings are acceptable.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

35 U.S.C. § 103

The Office Action rejects: claim 1 under 35 U.S.C. § 103 over van der Heide U.S. Patent 5,388,568 ("van der Heide"); claims 2-8 and 14-19 under 35 U.S.C. § 103 over van der Heide in view of Krauter U.S. Patent 5,464,007 ("Krauter"); claims 9-10 under 35 U.S.C. § 103 over van der Heide in view of Hall U.S. Patent 3,788,303 ("Hall"); claims 12-13 under 35 U.S.C. § 103 over van der Heide in view of Opie U.S. Patent 4,825, ("Opie"); and claims 20-21 under 35 U.S.C. § 103 over van der Heide in view of Krauter and further in view of Opie.

Applicant respectfully submits that all of the claims 1-10 and 12-21 are patentable over the cited art for at least the following reasons.

Claim 1

Among other things, the control mechanism of claim 1 includes first ball bearings arranged between an intermediate shaft and either first or second pinion shafts for enabling rotation of the first or second pinion shaft relative to the intermediate shaft.

The Office Action fairly admits that van der Heide does not disclose this feature.

However, the Office Action states that Hall teaches an analogous device which includes ball bearing 63 arranged between two shafts.

Applicant respectfully disagrees.

Hall discloses ball bearing 63. However, the ball bearing 63 in Hall is not arranged between two shafts. Instead, the ball bearing 63 is arranged between pulley P1 and pulley P2 (which is attached by pin 62 to shaft 46). Ball bearing 63 does not enable rotation of said a first or second pinion shaft relative to an intermediate shaft. Ball bearing 63 enables rotation of pulley P1 relative to pulley P2. This is all clear from inspection of FIG. 3 of Hall.

So no combination of van der Heide and Hall would ever produce a control mechanism that includes first ball bearings arranged between an intermediate shaft and either first or second pinion shafts for enabling rotation of the first or second pinion shaft relative to the intermediate shaft.

The Office Action also states that the feature of being arranged between an intermediate shaft and either first or second pinion shafts for enabling rotation of the first or second pinion shaft relative to the intermediate shaft “*does not impose any structural limitation upon the claimed apparatus*” and is a “*recitation with respect to the manner in which the apparatus is intended to be used.*”

At the outset, Applicant is at a loss to understand how the Office Action can state that a recitation that the ball bearings are “*arranged between an intermediate shaft and either first or second pinion shafts*” does not impose any structural limitation upon the claimed apparatus? Indeed, Applicant does not understand how a structural feature could possibly be more clearly recited!

Also, the quoted language does not recite any intended use of the claimed apparatus, but instead recites a function of the pinion shafts: “*for enabling rotation.*” Functional language in claims not only appropriate for reciting specific features of a claimed apparatus, but is specifically sanctioned by statute!

Finally, the Office Action states that it would have been obvious to one of ordinary skill in the art at the time of the invention to have rearranged the location of the ball bearings.

Applicant respectfully disagrees.

First, as noted above, van der Heide does not even include any ball bearings to “rearrange.”

Second, Hall only discloses a ball bearing arranged between adjacent pulleys. At most, if anyone tried to apply Hall's teaching to van der Heide, they would try to provide a ball bearing between pulleys 4b and 5b of van der Heide (however, van der Heide already includes the frame 2 between the pulleys 4b and 5b, so there would be no apparent reason to replace frame 2 with ball bearings). So again, even if one did try to apply Hall's teaching to van der Heide, one would not wind up with any ball bearing between sleeve 6a and either shaft 6 or shaft 8.

Finally, the Office Action quotes M.P.E.P. § 2144.04(VI)(C). However, the cases cited in M.P.E.P. § 2144.04(VI)(C) pertain to a situation where a single reference includes all of the claimed elements, and the claimed invention simply rearranges those elements. That is not the case here, and these cases are therefore not on point. Furthermore, M.P.E.P. § 2144.04(VI)(C) states that:

*"The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The **prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device.**" Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).*

(emphasis added).

Here, the Office Action has failed to provide any evidence from the prior art that would have provided a reason for one of ordinary skill in the art at the time the invention was made to have modified van der Heide's apparatus to include the claimed ball bearings.

Accordingly, for at least these reasons, Applicant respectfully submits that claim 1 is patentable over the cited art.

Claims 2-8, 9-10 and 12-13

Claims 2-8, 9-10 and 12-13 depend from claim 1. Applicant respectfully submits that Krauter, Hall and Opie do not remedy the shortcomings of claim 1 as set forth above. Therefore, claims 2-8, 9-10 and 12-13 are deemed patentable over the cited art for at least the reasons set forth above with respect to claim 1.

Claim 14

Among other things, the control and sealing mechanism of claim 14 includes first ball bearings arranged between an intermediate shaft and either first or second pinion shafts for enabling rotation of the first or second pinion shaft relative to the intermediate shaft.

As explained above with respect to claim 1, Applicant respectfully submits that no combination of the cited art would ever produce a control and sealing mechanism including this combination of features.

Accordingly, for at least these reasons, Applicant respectfully submit that claim 14 is patentable over the cited art.

Claims 15-21

Claims 15-21 depend from claim 14. Applicant respectfully submits that Krauter, Hall and Opie do not remedy the shortcomings of claim 14 as set forth above. Therefore, claims 15-21 are deemed patentable over the cited art for at least the reasons set forth above with respect to claim 14.

NEW CLAIM 22

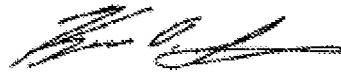
New claim 22 depends from claim 1 and is deemed patentable over the cited art for at least the reasons set forth above with respect to claim 1. Furthermore, Applicant respectfully submits that the cited art taken collectively does not disclose or suggest second ball bearings arranged between the intermediate shaft and another one of the first and second pinion shafts for enabling rotation of the other one of said first and second pinion shafts relative to the intermediate shaft.

CONCLUSION

In view of the foregoing explanations, Applicant respectfully requests that the Examiner reconsider and reexamine the present application, allow claims 1-10 and 12-22 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

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